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ABSTRACT

Policy domain study highlights the effect of location on network influence. Previous research has indicated a relationship between the groups and individuals with the strongest influence reputation and the location of these groups within the environment. In the reading policy environment such groups interact with one another in formal joint projects and informal collaborations. But regardless of the type of interaction, the relationships that these actors form with one another have an effect on their prominence--their centrality and prestige--in the national reading policy domain. Using this rationale, the hypothesis guiding this study is as follows: Central policy actors will be perceived to be more influential than peripheral policy actors in shaping national reading policy. This study of influence and domination employed social network analysis, a methodology commonly used for policy domain study. Social network requires specific procedures (outlined in the study) for data collection, boundary specification, and data measurement. Data included interview transcripts, archival documents, and previous research. Findings show the variety of affiliations among network actors. For example, one clique was composed of five government groups, while another clique comprised a group of policy makers and interest groups. The membership of still another clique illustrates the extent of collaboration between reading content groups, government offices, educational coalitions, and professional organizations. (Contains 5 tables and 27 references.) (NKA)

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# The Effect of Groups and Individuals on National Decisionmaking

## INFLUENCE AND DOMINATION IN THE READING POLICYMAKING ENVIRONMENT

**CIERA REPORT #3-025**

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**CIERA Inquiry 3: Policy and Profession**
**How do relationships among groups and individuals in the national reading policy domain affect the centrality and prestige—and hence the influence—of those actors?**

Policy domain study highlights the effect of location on network influence. Previous research has indicated a relationship between the groups and individuals with the strongest influence reputation and the location of these groups within the environment. In the reading policy environment, such groups interact with one another in formal joint projects and informal collaborations. But regardless of the type of interaction, the relationships that these actors form with one another have an effect on their prominence—their centrality and prestige—in the national reading policy domain. Using this rationale, the hypothesis guiding this study is as follows: *Central policy actors will be perceived to be more influential than peripheral policy actors in shaping national reading policy.*

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# The Effect of Groups and Individuals on National Decisionmaking: Influence and Domination in the Reading Policymaking Environment

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## Background

Reading policy discussion during the late 1990s provided a rich and unique opportunity for exploring the educational policymaking process. With the overarching goal of increasing the reading achievement of American school children, ambitious policies addressed national educational concerns, advocated specific instructional approaches, and adopted particular research methodologies. These policies, many of which focused on reading issues, were developed on a political stage that admitted relative newcomers, thus increasing the size and diversity of the national reading policy community. This facilitated a well-timed exploration into the negotiation, compromise, and competition involved in policymaking.

### The Politics of Reading

Once concentrated within the educational community, conversations about reading issues are now spreading over into the national policy environment. While reading was first politicized over a century ago (Ravitch, 2000), the political fires were rekindled by the development of several reading policies in our own time. The Reading Excellence Act of 1998 (REA) is a fitting illustration of these developments.

The REA defined reading as a system of strategies including phonemic awareness, reading fluency, prior knowledge, and adequate vocabulary,

implying an integration of the phonics and the whole language approaches to reading instruction. By defining reading in this way, the Act politicized pedagogy. The debate between phonics and whole language entered the national political realm, resulting in policy that some believed would resolve the so-called "reading wars" (Ravitch, 2000). Furthermore, the bipartisan support for the REA in the House and in the Senate implied a unified front toward improving nationwide reading achievement (Kennedy, 1998). Despite this belief, however, the controversy surrounding the REA persisted. For example, some teacher groups opposed the provision for student and teacher testing ("Welcome boost," 1998). In the end, the chasm between conservative politicians and whole-language proponents widened (Taylor, 1998; Coles, 2000). Initiatives such as the Reading Excellence Act reflected a persistently political aspect of reading. Because of this, the development of reading policy moved from consensus-building and lively conversation to unyielding positions and harsh arguments.

## The Perception of Influence

A study of national policymaking may examine policy actors' perceptions — specifically their perceptions of influential groups and individuals. When an actor intentionally relays information to other actors that results in a change of behavior, the initiating actor is said to have influence in the policy environment (Knoke, 1994). Perceived influence, on the other hand—also called *influence reputation*—"reflects a latent capacity to affect the outcome of events in which an actor has an interest" (Knoke, 1990). Perceived influence implies a credibility in the policy domain that allows an actor to promote particular interests that are accepted by other actors.

One recent study exploring policy actors in the national reading policy environment reported the influence reputation of these actors (McDaniel, Sims, & Miskel, 2001). Table 1 presents the rank ordering of the 10 most influential groups and individuals, as perceived by those who were interviewed for that study.

These groups and individuals represented a variety of interests, from traditional educational organizations such as the American Federation of Teachers (AFT) and the National Education Association (NEA) to government offices such as the National Institute of Child Health and Human Development (NICHD) of the U.S. Department of Health and Human Services. Elected officials including Representative Bill Goodling (R-PA), government programs such as the U.S. Department of Education's America Reads Challenge, and conservative organizations such as the Heritage Foundation were all perceived to be influential. These groups also participated in collaborative efforts such as the Learning First Alliance and congressional projects such as the National Research Council (NRC) Committee on Preventing Reading Difficulties in Young Children.

Despite the insight provided by this study, it fell into the one-dimensional, unambiguous trap described by Laumann & Knoke (1987). Although it suggested that coalition and collaboration were important activities for increasing policy influence, it did not explore these interactions fully. Furthermore,

it was not expanded to include the connection between status positions and policy influence.

Table 1: Rank Ordering of Policy Organizations (Adapted from McDaniel, Sims, & Miskel, 2001)

| Rank | Policy Organization |
|---|---|
| 1 | National Institute of Child Health and Human Development |
| 2 | American Federation of Teachers |
| 3 | International Reading Association |
| 4 | National Education Association |
| 5 | Committee on Preventing Reading Difficulties in Young Children |
| 6 | Office of Representative William F. Goodling (R-PA) |
| 7 | Council of Chief State School Officers |
| 8 | National School Board Association |
| 9.5 | Learning First Alliance |
| 9.5 | National Right to Read Foundation |

The purpose of this study is, then, twofold. First, it extends prior research by examining the complex idea of policy influence—a concept that looks at reputation and interaction in order to determine how political power flows throughout a policy domain. Second, it begins to explain the reading policy environment of the late 1990s, in which numerous and diverse groups and individuals shaped reading policy.

## Policy Domain Study

A policy domain is composed of actors who share similar policy interests (Mintrom & Vergari, 1998). Policy domain analysis highlights the patterns of relationships among these actors and explores how their relationships explain political attitudes and behaviors (Knoke, 1990). It also studies the means by which actors adopt positions or roles within the policy environment (Wasserman & Faust, 1994). Therefore, policy domain analysis bears in mind not just the configuration of actor relationships and the locations of actors within the network, but also the quality of these relationships and the properties of similarly positioned actors. As a result, the study of policy actors and their relationships may help us explain how power is distributed throughout a political environment—and the description of power distribution is the basic objective of policy domain analysis (Knoke, 1990).

A policy domain is composed of potential and existing relationships among policy actors (Knoke & Kuklinski, 1982). Policy networks range from fully disconnected systems in which no actor is linked to another, to entirely saturated networks which are pervaded by direct ties between actors. In a disconnected network, resources are extremely limited or nonexistent. Because of the low stakes involved, actors have little impetus to form connections. In a saturated network, on the other hand, resources are abundant and the stakes are high: actors are encouraged to form relationships with others in order to increase their political power.

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## The Nature of Policy Influence

Power, in the structural perspective, is based upon influence and domination (Knoke, 1990). Influence is the intentional transmission of information from one network actor to another. The result of this exchange is a modification of the recipient's actions (Knoke, 1994). The counterpart of influence, domination, involves the control of behavior by sanctions, rewards, or punishment: that is, the source of control, rather than the content of sanctions, affects behavior.

The effect of influence reputation on network influence has been the center of significant research. For example, Knoke (1990) suggests that policy actors who have prominent positions in the policy domain have high influence reputations. Studying the activity of policy actors and the subgroups and cliques in the policy domain provides greater insight into policymaking than the use of consensus variables that measure perceived influence alone. Such multi-layered exploration allows insight into intentional action and political success, and enables us to understand influence reputation and potential power (Laumann & Knoke, 1987).

The most effective policy actors take advantage of their networks by establishing relationships that increase their influence (Mintrom & Vergari, 1998). These relationships directly affect an actor's position and power in the policy domain. Furthermore, these ties provide a mechanism by which the actor can intentionally influence the attitudes and actions of other actors in their network.

One way of exploring how actors try to influence their environment is by measuring prominence within the entire network or "the extent to which an actor is visible within a system through direct and indirect ties to other actors" (Knoke & Burt, 1983, p. 238). Actors are said to be prominent if their ties to other actors in the network make all other actors aware of their existence. Prominence (in the sense of importance) is measured through the quantity and quality of relationships between actors, or, in network terminology, in the form of centrality prominence and prestige prominence (Wasserman & Faust, 1994).

### Centrality

Centrality "refers to an individual actor's position in the network relative to others" (Rowley, 1997, p. 898). The most central positions have reciprocal relationships with other actors (Knoke, 1990) and are in positions of status (Rowley, 1997). Often these actors are called "stars," because the most central actor is tied to other actors and is the center of attention (Scott, 2000).

Centrality is an essential attribute of the network; however, it is a challenging concept to define, perhaps due to the multi-level nature of structural analysis (Degenne and Forsé, 1999). The locally central actor has a large number of relations with other actors, while the globally central actor has a strategic position within the network. Actors with high local centrality are more powerful than actors with higher levels of global centrality (Mizruchi & Galaskiewicz, 1994). In effect, the most central actors have the greatest involvement in all network relations (Knoke, 1990), occupy high-status positions in the network (Rowley, 1997), and are often located in the network core (Gil-Mendieta & Schmidt, 1996).

The peripheral actors—also called structurally marginal actors (Mehra, Kilduff, & Brass, 1998)— are less connected to resources, less influential, and more isolated than their central counterparts (Knoke, 1994). They do, however, play important roles in the network. For example, Howard's (1997) research found that peripheral groups form meaningful relationships with core or central actors, which increase their access to network power. Peripheral actors also show solidarity amongst themselves, through a sub-network of tightly-bound relationships along the outskirts of the larger network.

For the purpose of this study, non-degree centrality measures have been used to determine visibility in the policy environment. Non-degree centrality focuses not on the quality of relational ties, but on the quantity of actor relationships. In essence, the centrally located actors control and have greater access to network resources. When actors have this control, then other actors have a greater dependence on them.

### Prestige

Prestige is a consequence of direct and indirect ties between actors. Unlike centrality, which highlights the number of actor relationships, prestige compares the quality of connections among actors. The most prestigious actor is the *object* of a significant number of relationships (Wasserman & Faust, 1994). In other words, they are chosen as partners in relationships, rather than the ones who choose (Knoke & Kuklinski, 1982). Prestige can also be referred to as domination (Knoke, 1994), since the prestigious actor can control the actions of other actors through reward and sanction. Prestige increases as the actor becomes the object of more ties, and may decrease if the actor develops a relationship with another actor. In summary, prestige gauges the deference shown toward and the popularity of actors by focusing on the receiver in actor-to-actor relationships.

## Hypothesis

Policy domain study highlights the effect of location on network influence. In other words, it examines the relationship between status and influence reputation. Previous research has indicated a relationship between the groups and individuals with the strongest influence reputation and the location of these groups within the environment. For example, Arabie and Wind (1994) posit that effective actors weave their way through a complex environment, learning to negotiate and maintain long-term relationships with key stakeholders. In the reading policy environment, such groups interact with one another in formal joint projects and informal collaborations. But regardless of the type of interaction, the relationships that these actors form with one another have an effect on their prominence—their centrality and prestige—in the national reading policy domain. Using this rationale, the hypothesis guiding this study is as follows: *Central policy actors will be perceived to be more influential than peripheral policy actors in shaping national reading policy.*

# Political Network Analysis

This study of influence and domination employed social network analysis, a methodology commonly used for policy domain study. Social network analysis requires specific procedures for data collection, boundary specification, and data measurement. We review these methods below.

## Sample

We selected our initial sample by blending nominalist and realist approaches to network boundary specification. The realist approach assumes that network actors are aware of one another and will not exclude important actors. To this end, we used the snowball sampling technique recommended by Wassermann and Faust (1994): we began interviewing prominent policy leaders and interest advocates and asked them to name groups or individuals whom they believed to be influential in the reading policy environment. From this first target group our data sample snowballed to include a second target group, and so on. The nominalist approach, on the other hand, assumes that the researcher has the knowledge necessary to specify the network and can establish criteria for this process (Knoke, 1994). While continuing the snowball technique, we also searched organizational websites and read congressional testimony and published reports in order to identify any important actors who may not have been included in the snowball sample.

In total, we identified 118 groups and individuals who composed the national reading policy domain. The policymakers included elected and appointed officials, their staffers, and government bureaucrats: officials from the U.S. Department of Education, the Senate Committee on Health, Education, Labor and Pensions, the House Committee on Education and the Workforce, and the National Institutes of Health among others. The interest groups in our sample represented the broad range of actors involved in national reading issues, including think tanks and private foundations such as the Heritage Foundation and the Center on Education Policy; media outlets such as the *Baltimore Sun*; academic organizations such as the American Educational Research Association; educational organizations such as the National Education Association; and national centers such as the National Center for Education and the Economy.

We also employed a criterion of substantive relevance in order to accurately specify the national reading policy domain. First, it was determined that we would focus on groups, offices, and institutions, rather than on individuals. In the national reading policy environment, as in any social structure, individuals move in and out of various positions; however, the positions themselves remain intact within the structure (Freeman, 1992). Therefore, a criterion of substantive relevance, adapted from Laumann and Knoke (1987) was established. In other words, a standard was applied that circumscribed the policy environment (Laumann, Marsden, & Prensky, 1992).

In essence, a policy actor was included as a member of the national reading policy network if that actor was mentioned at least three times, using any of

the following four criteria. First, if interview participants identified the policy actor as active in national reading policymaking. Second, if prominent leaders suggested that the actor was important enough to include in our study. Third, if the actor was identified using computerized searches of Congressional hearings on the Reading Excellence Act and the reauthorization of the Elementary and Secondary Education Act of 1965, or through searches of media articles from six major newspapers. Finally, the policy actor was included when the actor was identified through computerized searches of press releases, policy statements, newsletters, or any other documents provided by the interviewees or when acknowledged on any of the websites of all of the 118 identified organizations.

Using a criterion of substantive relevance, an additional 26 policy actors were added to our initial sample. Given the level of analysis, we aggregated all policy actors to their affiliated group, office, or institution. Additionally, because we included more than one actor from each of 10 organizations, data were aggregated to the organizational level. Therefore, we concluded that the national reading policy domain in the late 1990s was composed of 134 policy actors.

## Data

The data for this study included interview transcripts, archival documents, and previous research. We began by using transcripts from interviews conducted with 107 policy actors from our initial sample of 118. Participants were guaranteed anonymity and consented to 30-minute interviews, conducted in person or via telephone. Of these 107 participants, 55 were interviewed in person, 50 were interviewed via telephone, and two chose to respond to interview questions by e-mail. Of the remaining 11 actors, nine were not interviewed due to office policies or time constraints, and two never responded to our inquiries.

The interview transcripts described collaborations with other organizations, cited those groups who were most active in the reading policy environment, and rated the influence of their activities. (A complete interview schedule is available from the authors). While the interviews were conducted as part of a larger study on national reading policymaking, two questions provided data specifically suited for a social structure analysis:

- What individuals and groups are active in trying to influence federal reading policy?
- (For interest group members) With what individuals or groups have you or your organization worked in regard to reading policy, proposed legislation, rules and so forth? (For policymakers) What individuals and groups have contacted you or your office with regard to reading policy, proposed legislation, rules and so forth?

The responses provided a list of groups and individuals with whom the respondent had interacted, by whom the participant had been contacted, and whom the participant had contacted. In addition to analyzing these responses, we looked carefully at the entire transcript for each participant, scrutinizing relevant contextual data.

We then used archival records to infer network structure. Burt (1983), among others, described two considerations that apply to such work. First, the analyzed documents must accurately depict the relationships among policy actors. Second, the analyst must remember that the policy actors created these records. As such these documents have intended audiences and biases. Therefore, Burt recommended that researchers address this problem through an expansive and systematic collection of archival data. For our study, we searched web sites for the 134 identified policy actors(100%), as well as records of Congressional hearings and newspaper articles. This document analysis provided us with essential network information and supplemented the interview transcripts.

Finally, our previous research provided us with a list of reading policy actors ranked according to their influence reputation in the network. An attribute variable was created using this ranking that allowed us to view influence reputation as an attribute variable. The details of the previous study are explained in detail in McDaniel, Sims, and Miskel (2001).

## Analysis

Using methods explained by Wasserman and Faust (1994), among others, data collected from Interview Question 1 and the archival records were analyzed in order to identify the relationships within the network and to determine the structure of the network itself. The actors were set into a sociomatrix that represented the national reading policy network. The data were then organized in a row-and-column method, with each group or individual forming one row and one column on an adjacency matrix.

The responses to Interview Question 2 were converted to binary variables that were used to measure the structure of the relationships within the network. Specifically, if a relationship existed between organizations we assigned it a score of 1; and if no relationship existed we assigned a score of 0. These data were particularly important to our efforts to determine centrality and other network characteristics. They also allowed us to determine the strength of network ties and the directional aspects of the actor relationships. The complexity of the algebraic representation—the basis of both graph and matrix—has been overcome by recent technological developments. UCINET V, a social network analysis program, performed the algebraic functions necessary to determine centrality, prestige, and other network and actor characteristics.

## Measures

For this study, we measured prominence using degree centrality (non-directional) and prestige (in-degree centrality) indicators. In all network analyses, relationships indicate a connection between two actors (Knoke, 1994). Therefore, when considering the number of a particular actor's relationships, the total possible number is one less than the total number of actors ($g$), or ($g$ – 1). In the global network, 134 identified policy actors were iden-

tified, so the possible number of relationships for any global network actor was 133.

Specifically, two formulae were used to derive prominence. First, we used UCINET V to determine non-directional degree centrality, meaning that the number of relationships, rather than the type of connection between actors, was taken into consideration. In particular, a standardized measure for centrality measured the number of ties to each actor, thus measuring the activity of that actor within the national reading policymaking environment. Using $C'$ to denote a standardized centrality measure, $d(n_i)$ to represent the individual actor, and $C'_D(n_i)$ to denote actor-level activity, the following standardized measure was used:

$$C'_D(n_i) = \frac{d(n_i)}{g-1}$$

We also used UCINET V to determine prestige—the other measure of prominence. A useful measure in this regard is in-degree centrality, that reflects how policy actors choose a particular actor with whom to interact. Using P' to denote a standardized prestige measure, $x + i$ to represent the nominations made for the individual actor, and $P'D(ni)$ to reflect actor-level prestige, the following formula was used.

$$P'_D(n_i) = \frac{x_{+i}}{g-1}$$

Standardized results fell within a range from 0 to 1.0. An actor with 1.0 nondegree centrality would be connected to every other actor in the network; an actor with a maximum prestige measure of 1.0 would be chosen by every other actor as a networking partner. A score of 0 on these same measures would indicate no activity in the environment and no popularity among network actors, respectively.

These findings and the rank ordering of influential policy actors were correlated using UCINET V. We were also able to make inferences about network location. In particular, actors with prominence measures closer to 1.0 were located near the center of the environment, while actors with prominence measures of 0.0 were located at the periphery.

Finally, we conducted a cohesive subgroup analysis that identified network cliques in order to focus on proximity (Wasserman & Faust, 1994). A clique is the most stringent classification of a network subgroup, requiring at least 3 actors who are in direct, reciprocal relationships with one another. During this procedure, a matrix was developed that mapped the membership of actors in all network cliques. This allowed us to explain policy actor involvement and co-membership in subgroups within the national reading policy domain.

# The National Reading Policy Domain

## Visibility

The first measure—non-directional centrality—assessed the policy actors' involvement by measuring each actor's relationships. Overall, there was a relationship between centrality measures and influence reputation ($r^2 = .617$, where $p < .000$). This provided support for the study hypothesis, that central actors would be perceived to be more influential than peripheral policy actors in shaping national reading policy.

The national policy network had a network centralization of 34.27%, meaning that the actors were somewhat organized around its most central or involved actor. Centralization resides on a spectrum: at one extreme is the star network, in which 100% centralization indicates that all other actors are tied to the central actor. At the other extreme, the complete network would display 0% network centralization. In such a case every policy actor is directly connected to every other actor; therefore, the network has no core. The national reading policy network fell within this spectrum: some type of core did exist, and 34.27% of the actors were located around this center.

The centrality test also provided additional insight into the location of individual actors. In order to discuss their location, it was necessary to set boundaries for three areas of the network—the core, the margin, and the periphery—using suggestions made by Scott (2000). The 44 most central actors were deemed the core. There was an obvious drop in centrality scores for actors ranking as 45th most central or lower, making this a logical boundary between the core and margin of the network. Because of another obvious drop in scores, the lower boundary of the margin was set after the 109th lowest actor; the 25 policy actors with the lowest centrality scores were labeled as the periphery.

Table 2 presents the 10 most central policy actors in the national reading policy domain. The centrality measure represents the number of ties to other actors, with a maximum possibility of 133, or (N – 1), relationships. The normalized degree centrality measure is the proportion of actual relationships to possible relationships, where the center of the star network would score 100% and the completely isolated policy actor would score 0%.

Based on group location, the most visible actor in the national reading policy network was the NRC Committee on Preventing Reading Difficulties in Young Children. The policy actor from the NRC Committee had 62 relationships with other actors and a 46.62% centrality measure. This finding reflected a network without a definitive center; however, the NRC Committee was the most central group in our sample and therefore the most visible of the national reading policy actors, having relationships with 46.2% of the domain actors. Another reading policy actor remarked that "The NRC study has probably had more impact [on the reading policy environment] than anything else."

Table 2: The 10 Most Visible National Reading Policy Actors

| Rank | Organization | Centrality | Normalized |
|---|---|---|---|
| 1 | National Research Council Committee on Preventing Reading Difficulties in Young Children | 62 | 46.62 |
| 2 | House Committee on Education and the Workforce: Republicans | 56 | 42.11 |
| 3 | National Education Association | 48 | 36.09 |
| 4 | American Federation of Teachers | 47 | 35.34 |
| 5 | Office of the America Reads Program | 43 | 32.33 |
| 6 | National Institute of Child Health and Human Development | 42 | 31.58 |
| 7 | International Reading Association | 41 | 30.83 |
| 8 | Office of Special Initiatives | 39 | 29.32 |
| 9 | Office of the House Committee on Education and the Workforce | 37 | 27.82 |
| 10 | Office of the U.S. Secretary of Education | 36 | 27.07 |

The remaining core members were minimally organized around the NRC Committee, and each showed at least 29 relationships with other policy actors. The second most visible policy actor was Rep. Bill Goodling, an understandably central actor given his work with the Reading Excellence Act and his efforts on national reading issues. Representative Goodling was connected with 56 national domain actors. In describing his visibility, one actor noted, "I think Bill Goodling has been very influential and has managed to stake out control over the issue." The national teachers organizations, the NEA and the AFT, ranked third and fourth with 48 and 47 relationships, respectively. One actor explained the AFT's visibility as a result of its obvious presence in the policymaking arena. He asserted, "the loudest group has been the AFT," especially after the group "fell in line with the phonics crowd." The NEA, according to another actor, demonstrated different tactics, but was also very visible in this domain. She described the NEA's strategy as follows: "Let's boost public confidence and get people excited about reading and then we'll kind of like get the research message in underneath." Despite differing perceptions of these groups, both became central policy actors.

The USDE America Reads Program had 43 relationships with national domain actors, which placed it in fifth place, following the NEA and the AFT. A prominent leader in this office was credited for "being the best at getting together coalitions of people to really get something done in the United States." The sixth most visible actor, with 42 relationships, was the U.S. Department of Health and Human Services' National Institute of Child Health and Human Development (NICHD). The NICHD was involved in much of the reading policy activity of the late 1990s. One actor acknowledged the work of a particular individual in this office as follows: "The most influential group is probably NICHD and that would really have to go back to [this policy actor].... He does have the knowledge base based on a lot of research over a long time... and he has enough latitude as bureaucrat to be out hustling these ideas. I mean, he is a salesperson of one approach to reading with a ministerial zeal." The NICHD was followed by the International Reading Association (IRA), which was connected to 41 national policy actors. One actor described the IRA as "potentially the most influential." To further explain the IRA's centrality, another actor noted that the group had "a credibility representing the people who are most affected by this on a daily

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basis.... I think that they just have a lot of lobbying power, whether or not it's based on past research or evidence."

The U.S. Department of Education's Office of Special Initiatives ranked eighth with 39 relationships, most likely due to its emphasis on the Reading Excellence Program. According to one actor, the Department of Education became a major player in national reading policymaking, developing "fourteen literacy programs, out of [those] that exist across the nation." The office of the House Committee on Education and the Workforce and the office of the U.S. Secretary of Education ranked ninth and tenth, with connections to 37 and 36 national actors, respectively.

## Prestige

Actor prestige, as measured by in-degree centrality, provided additional information about the prominence of national policy actors. After determining prestige measures, a correlational analysis revealed a .434 relationship ($p < .001$), supporting the claim of a significant and moderate relationship between prominence and perceived influence. As in our centrality analysis, we found no absolute center, where 100% of the network actors would be connected to a single actor. The overall prestige centrality was 26.33%, meaning that about 26% of the parties in the sample were organized around the most prestigious actor.

The prestige analysis also provided us with the means to rank individual actors according to their popularity. Table 3 lists the 10 most prestigious actors in the national reading policy domain.

Table 3: The 10 Most Prestigious National Reading Policy Actors

| Rank | Organization | Prestige | Normalized |
|---|---|---|---|
| 1 | National Research Council Committee on Preventing Reading Difficulties in Young Children | 45 | 33.83 |
| 2 | National Education Association | 39 | 29.32 |
| 3 | American Federation of Teachers | 39 | 29.32 |
| 4 | National Institute of Child Health and Human Development | 38 | 28.57 |
| 5 | Office of the House Committee on Education and the Workforce | 37 | 27.82 |
| 6 | International Reading Association | 36 | 27.07 |
| 7 | Office of the America Reads Program | 35 | 26.32 |
| 8 | Office of the U.S. Secretary of Education | 35 | 26.32 |
| 9 | Office of Special Initiatives | 31 | 23.31 |
| 10 | House Committee on Education and the Workforce: Republicans | 29 | 21.80 |

Similar to centrality measures, the prestige measures have been presented in two ways. First, the frequency of ties to a given actor is provided in raw scores. Then, the normalized scores are reported. In essence, this gives us the percentage of actual ties to the actor.


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The most prestigious actor in the national reading policy domain was the NRC Committee on Preventing Reading Difficulties in Young Children, with 45 of 133 possible connections to other actors. This is perhaps due to the popularity of the committee's report, which provided, according to one actor, "a reasonable, broader definition that I think across the country people can use and understand and teach with and make it work." According to one respondent, the report was "so broad-based" that the Democratic administration "made a big commitment to disseminating its results."

The NEA and the AFT were tied for the second spot, with each chosen by 39 policy actors. One actor suggested that the popularity of these professional organizations was perhaps due to their ability to move beyond "policymakers who were a little too prescriptive about what needs to happen in the classroom." The same individual believed that groups such as the NEA and the AFT moved beyond prescription and into program improvements; as a result of changing strategies, these actors became more prestigious. Another actor explained that the NEA and the AFT demonstrated their political savvy when they "tried to have people in their community who knew the issues... who are not self-conscious about going to their representatives.... They have power because they pretend to be more moderate and they cross the aisles." Others supported this observation, claiming, for example, that the NEA and the AFT "have a great deal of clout in the Congress, and so you have to look at what they are doing and see where they are coming down. It helps you structure where you want to be." It appears that some groups learned to ally themselves with NEA and AFT policy stances because of the latter two groups' power. In support of this idea one policy actor noted, "The AFT and the NEA are by far the most powerful politically."

Third was the NICHD, with 38 connections from other actors. One actor explained that the NICHD's efforts were enticing to policymakers because of their quantitative and easy-to-understand findings. Another noted that the group "has been very, very successful at putting forward the research that has been done." A third noted that "it's a medical thing. You just have to believe them, they're the experts!" For whatever reason, the popularity of this group is clear.

The House Committee on Education and the Workforce, recipient of 37 links, followed the NICHD in the rankings. The REA originated in the Committee and was chaired by central actor Rep. Bill Goodling. The IRA, which scored fifth, had 36 relationships. According to one policy actor, the IRA was effective and well-received: "Others have been active, but less effective and even spurned... The IRA has spoken out against what it views as one-size-fits-all tactics toward reading improvement."

Following the IRA were three offices in the Department of Education: the Office of the America Reads Program (35 connections), the Office of the Secretary (also 35 connections), and the Office of Special Initiatives (34 connections). According to one policy actor, the Department is "obviously a player in all of this." Another actor provided some explanation into the popularity of Department offices: "Everything is so politicized within the Department... and the things coming out of the Secretary's office are just considered to be so political... All the paperwork says that President did this, and the President did a great job, and the marketing people write the material as opposed to the policy people." This type of marketing appears to have been effective, based on the prestige rankings of the Department's offices.

Next in order was Representative Bill Goodling, chosen by 29 national actors. One policy actor explained Goodling's popularity by stating, "Obviously education bills are always going through him." With regard to his prestige another actor stated, "Some people in the Department [of Education] have buckled and given into the pressure from Goodling and those who sort of are with him." In support, other actors noted that "Being the chair of the education committee is a pretty good place to be." Goodling "has had a tremendous impact on literacy by his focus on working with families." Furthermore, there has not "been a person who has had more impact on the Hill than Bill Goodling."

## Group Involvement

Again, we used the most stringent possible requirement for subgroup identification, a clique identification, specifying direct, reciprocal relationships among a minimum of three actors, identifying 775 subgroups in the environment. The identification of these cliques provided us with a partition indicator matrix of overlapping subgroups that were indicators of social cohesion. It also generated a co-membership matrix that illustrated the number of cliques in which each actor had membership. This made it possible for us to identify how the actors were situated within the identified cliques.

The first matrix showed the clique participation of each policy actor in relationship to every other actor. It also showed the total clique participation. Table 4 presents the highest clique membership in the national reading policy domain.

Table 4: Group Involvement

| Organization | Clique Membership (N) | % Membership ($N = 775$) |
|---|---|---|
| National Reading Council | 210 | 27% |
| National Education Association | 172 | 22% |
| Office of Representative William F. Goodling (R-PA) | 171 | 22% |
| National Institute of Child Health and Human Development | 137 | 18% |
| American Federation of Teachers | 121 | 16% |
| Office of Special Initiatives | 110 | 14% |
| Office of the America Reads Challenge Program | 108 | 14% |
| National Institute for Literacy | 98 | 13% |
| International Reading Association | 97 | 13% |
| Office of Educational Research and Improvement | 73 | 9% |

The most central network actor—the NRC Committee on Preventing Reading Difficulties in Young Children—also showed the greatest involvement in subgroup relationships, having membership in 27% of the 775 identified cliques ($N = 210$). This wide-ranging involvement might be a consequence of the panel's creation and distribution of a well-known report, as described in the following statement:



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It's being quoted and referenced quite a bit. What it has done is to support the direction that a lot of people are willing to go. It's interesting. People on the side of whole language find enough in that they felt like they weren't being deep-sixed. People on the other end feel like they were vindicated, which I guess shows what a good compromise it was.

The NRC Committee's approach seems to have appealed to people positioned all along the spectrum of beliefs about reading instruction. In the words of another policy actor, "I thought it had a major effect because it basically said, 'Look, this [the great debate] is a false fight... a good program will have the best of both worlds." Supporting this, another actor stated that the Committee's report was "a sensible, comprehensive look at a variety of strategies and approaches to reading." The balanced approach appealed to many actors, perhaps resulting in the Committee's involvement in so many of the network's subgroups.

The next most involved actors with regard to group membership were the NEA ($N = 172$) and the office of Representative Goodling ($N = 171$), both of which claimed membership in 22% of the identified cliques. The NEA, as indicated by one policy actor, is "all over... the place!" In support, another remarked, "They are able to push their agenda at every level." As the interviews with national policy actors revealed, Representative Goodling was instrumental in keeping the focus on American students' improved reading achievement: "I think Mr. Goodling especially wants his legacy to be that he really did do something to help improve reading scores." This emphasis might explain his high involvement in network subgroups.

The NICHD was a member of 18% of the network cliques ($N = 137$). One policy actor remarked of the NICHD: "They have been effective because they have that weight of [significant scientific] research and because the researchers who have done that work have finally emerged to actually talk about it and connect the research to the policy implication." This activity perhaps explains some of the NICHD group involvement. The AFT followed the NICHD, and was a member of 16% of the cliques ($N = 121$). The Offices of Special Initiatives and the America Reads Challenge Program were both involved in 14% of the network cliques ($N = 110$ and $N = 108$, respectively). Following these government offices were the National Institute for Literacy (NIFL) and the IRA, each having membership in 13% of the network cliques ($N = 98$ and $N = 97$). The 10th most involved actor was the Department of Education's Office of Educational Research and Improvement (OERI), which participated in 9% of the network cliques ($N = 73$).

Table 5 is a reduced partition indicator matrix that hierarchically clusters the national actors based upon membership. Because of size considerations this reduced table was limited to shared membership in at least 35 cliques. In sum, analysis revealed many overlapping cliques in the national reading domain.

The highest co-membership measure, indicating shared membership in 78 groups, was shared by the NEA and the AFT, the two national teachers' organizations. The next level of co-membership added the NRC panel and the NICHD, which, along with the NEA and the AFT, were co-members in 61 groups. The Office of Special Initiatives was added next, and shared 48 cliques with the NEA, the AFT, the NRC committee, and the NICHID. The American Reads Challenge Program and the Office of Representative Goo-

dling were shared membership with the previously mentioned actors in 45 groups.

The diversity of the groups sharing membership in policy subgroups that shape national reading policy is illustrated in the last line of Table 5. Specifically, the NEA, the AFT, the NRC panel, the NICHD, the two Department of Education offices, Representative Goodling's office, the Council of Chief State School Officers, NIFL, Harvard Graduate School of Education, and the IRA were co-members in 35 subgroups within the national reading policy domain.

There is clear collaboration among these groups, despite differences in their policy beliefs. When asked about the political power of joint ventures, one policy actor stated, "We would, based on the coalitions and alliances we have now, we would look to the same community with which we work and don't always agree... In the collective we're going to come up with something better." It appears that many national policy actors adapted this strategy.

Table 5: Group Co-Membership

| Co-Members | *N* (of 775 possible cliques) |
|---|---|
| National Education Association and American Federation of Teachers | 78 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, and National Institute for Child Health and Human Development | 61 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, and Office of Special Initiatives | 48 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, Office of Special Initiatives, Office of Representative William F. Goodling (R-PA), and Office of the America Reads Program | 45 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, Office of Special Initiatives, Office of Representative William F. Goodling (R-PA), Office of the America Reads Program, and Council of Chief State School Officers | 44 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, Office of Special Initiatives, Office of Representative William F. Goodling (R-PA), Office of the America Reads Program, Council of Chief State School Officers, and National Institute for Literacy | 42 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, Office of Special Initiatives, Office of Representative William F. Goodling (R-PA), Office of the America Reads Program, Council of Chief State School Officers, National Institute for Literacy, and Harvard Graduate School of Education | 36 |
| National Education Association, American Federation of Teachers, Preventing Reading Difficulties, National Institute for Child Health and Human Development, Office of Special Initiatives, Office of Representative William F. Goodling (R-PA), Office of the America Reads Program, Council of Chief State School Officers, National Institute for Literacy, Harvard Graduate School of Education, and International Reading Association | 35 |

Again, the clique is the most stringent classification of subgroup. Given this fact, it is possible to conclude not only that the national reading policy domain was composed of numerous subgroups, but also, and perhaps more importantly, that these subgroups were composed of actors who had frequent contact and direct relationships with one another. Furthermore, these



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cohesive subgroups were often overlapping or nested, as illustrated by the number of actors with shared membership in the 775 identified cliques. In fact, 132 of the 134 national reading policy actors were members of at least one clique in the national reading policy domain. Combining this information with our previous findings on centralization it is possible to conclude that subgroups of involved and central actors are located near the center of the national reading policy domain.

## The Shaping of National Reading Policy Making

One participant explains the diversity of the actors involved in shaping national reading policy thus: "The proposals have come from left field, center field, right field... There's incredible diversity in the kinds of proposals... the half-baked, the hare-brained, the well-intentioned, the tried and true... It's all over the place." While a microanalysis is beyond the scope of this study, our work clearly shows the variety of affiliations among network actors. For example, one clique was composed of five government groups: The NRC panel, the NICHD, the Office of Adult Education, the Office of the America Reads Challenge, and the Office of Compensatory Education. Another clique comprised a group of policy makers and interest groups: the AFT, the NEA, the House Committee on Education and the Workforce, and the NRC panel. The membership of still another clique illustrates the extent of collaboration between reading content groups, government offices, educational coalitions, and professional associations: the Office of the America Reads Challenge, the Learning First Alliance, the Office of Reading Excellence, and the National Council of Teachers of English. With 775 subgroups in this environment, a micro-level analysis would most likely provide a wealth of insight.

We believe that we have supported our assertion that central policy actors would be perceived as more influential than peripheral actors in shaping national reading policy. According to our findings, the National Reading Council's Committee on Preventing Reading Difficulties in Young Children was by far the most prestigious, visible, and involved group. This concurs with the findings of other studies, such as those conducted by Krackhardt and Brass (1994) and Gil-Mendieta and Schmidt (1996), which have shown how prominent network actors have the most direct and indirect access to other network actors.

We found a moderate relationship between perceived influence and network centrality, with the NRC committee being identified as most prominent. Although we supported our hypothesis and began to understand the complex concept of influence, perceptions of the committee's influence varied. In effect, some policy actors did not perceive the committee to be very influential. As one actor stated, the committee's report was "well-intended" and "excellent as it is, it is just not having any impact. It's relatively uninfluential and it's just as well." If influence, however, is reliant on visibility, prestige, and involvement, then this committee was an extremely important player in the reading policymaking process. Its prominence might be due to its nonpartisan makeup and consensus approach. One policy actor believed

that the impartiality of the group allowed it "to be one of the most effective" in shaping reading policy.

Other groups also held positions of prominence, especially the NEA, the AFT, the NICHD, the IRA, and several offices of the U.S. Department of Education. The NEA and AFT, according to a policymaker, "have a great deal of clout in the Congress." Another interest group member concurs: "They have continued to stay very active in the area. They have very effectively communicated to both teachers and policymakers based on facts and information," using both "the numbers of their membership and the weight of the research." The visibility, involvement, and prestige of these groups indicated that while they shared the policymaking environment with more players than in the past, they were still very integral policy actors.

The prominence of the NICHD and various offices from the Department of Education demonstrates how government programs, often as a result of legislation, become policy actors in and of themselves. The NICHD, according to one group, was "among the primary and most credible sources among policymakers." Its prominence suggests that many other actors agreed with this statement.

The IRA, perhaps more a professional association or an educational interest organization than a policy actor, was also prominent in this arena. One actor explained this prominence by the group's ability to speak "out against what it views as one-size-fits-all tactics toward reading improvement." Another comment also helped to explain the group's visibility and involvement in the reading policymaking environment: "It's a very diverse, diverse professional organization with lots of different perspectives." As in the case of the NRC committee, the IRA's diversity allowed it to be very accessible to other policy actors.

We believe that further analysis of the most central and prestigious groups and their connections in network subgroups will more clearly reveal the roles and positions of these groups. At a micro level of analysis, we must look at the transmission of group resources more closely, and thus determine the specific roles and positions of key network actors. Such analysis will allow greater characterization of individual policy actors, identifying functions such as bridging or gatekeeping, and will more effectively describe how power, influence, and other group resources are distributed throughout the national reading policy environment.

## Conclusion

Policy actors believed that President Clinton's emphasis on reading, during the time that Representative Goodling was shaping the REA, provided the impetus for the national focus on reading. As noted by one policy actor, "We have a president who's interested in education... I think the level of interest the President gives to certain topics, and the amount of time he or she spends just discussing the issue certainly helps generate interest." In support of this idea another actor remarked, "The general bully pulpit that the Presi-

dent has been able to give to education, which is unbelievable... has helped to raise all of these issues in education, and reading has been highlighted."

The nation will continue to keep its eyes on reading issues, and current educational policy events strengthen this assertion. For example, President Bush has proposed "No Child Left Behind," his education bill introduced as House Resolution 1 (No Child Left Behind Act of 2001). This proposal incorporates the REA, Title 1, and other national educational policies into a single bill. Among its many provisions, No Child Left Behind specifically encourages states to emphasize research-proven reading practices and calls for annual testing in reading and mathematics. Moreover, the bill is specifically aimed at assisting disadvantaged children, who have long achieved at much lower levels than their peers. Teacher training and professional development in reading instruction are also highlighted, two areas that may provide additional insight into the national reading policy environment.

At the same time, public concern over the state of reading levels in the United States remains an important consideration. For example, according to a policy actor, "There's definitely been a larger awareness about reading from people who don't necessarily know about reading." As described by another policy actor, "Those... who have children see reading as the key to the literacy life, the literacy self, that knowing anything else depends upon children's ability to read... It's central, I think, to parental concerns." Given the continued emphasis on reading achievement, coupled with mounting concern over low literacy levels and other reading-related issues, our research and related inquiries will continue to explore the national reading policy domain. Greater insight into the process by which policy actors connect with one another in order to obtain increased network power will also enhance our understanding of those who are shaping policies that affect all schoolchildren.

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